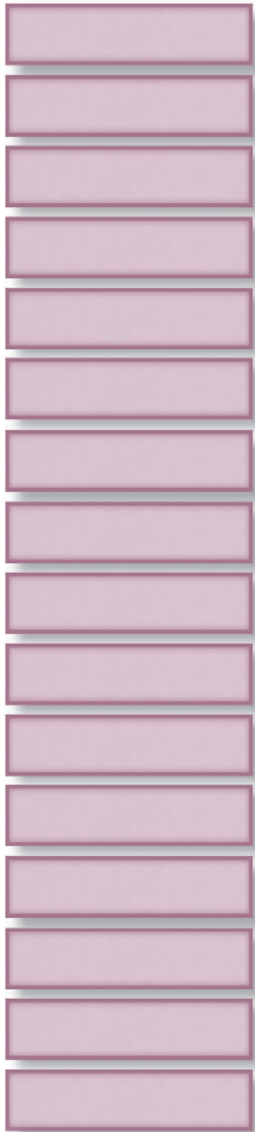


ISTEP+

Grade 9 Item Sampler





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Dear Colleague:

In this sampler, you will find information designed to guide, direct, and clarify your efforts in preparing for and administering Indiana Statewide Testing for Educational Progress-Plus (*ISTEP+*). We want your students to be prepared to pass *ISTEP+* every time they take the test, and we feel this sampler is an excellent instructional resource.

As a classroom teacher, your knowledge of the Indiana Academic Standards assessed on *ISTEP+* is very important. Your ability to use that knowledge in your instructional strategies with your students and your familiarity with all aspects of test administration are critically important to students' success on the test and with the rest of their coursework. You influence students' choices and futures as well as their academic achievement.

We expect that the information provided in this sampler will help you in your ongoing efforts to educate and motivate your students. Please see the Department of Education's Web site at **www.doe.state.in.us** for additional information about Indiana Statewide Testing for Educational Progress-Plus (*ISTEP+*).

Thank you for all you do to prepare students to meet the challenges they will face in this ever-changing and challenging world.

Sincerely,

A handwritten signature in black ink, reading "Dr. Suellen Reed". The signature is written in a cursive, flowing style.

Dr. Suellen Reed
Superintendent of Public Instruction

Introduction

The *Grade 9 Item Sampler* provides information about the *ISTEP+* tests for students, parents, educators, and others affected by the tests. The information in this sampler has been compiled by the Division of School Assessment of the Indiana Department of Education and CTB/McGraw-Hill, the test development contractor for Indiana.

The test items (questions) in this sampler are intended to provide teachers with specific examples of how the different standards will be measured on the test. These examples can serve as models when teachers are constructing test items for classroom assessment. The sampler is not a practice test. This book includes sample test items and scoring rubrics for both English/Language Arts and Mathematics that reflect the Indiana Academic Standards adopted in November 2000. All items included in this book are samples of the types of items assessed on *ISTEP+* and **not** actual items. The scoring rubrics presented for Language Conventions and Writing Applications are the actual rubrics used to score the writing prompts and/or extended-response items for English/Language Arts. All samples are representative of the types of items that students taking the *ISTEP+* assessment at Grade 9 will be required to answer.

A condensed version of the Indiana Academic Standards is included in this sampler. These are the skills that all Indiana students are required to know and be able to perform. Complete copies of the Indiana Academic Standards can be obtained from the Department of Education's Web site at www.doe.state.in.us or directly from the Department of Education.

Frequently Asked Questions

Q. What are the *ISTEP+* assessments for Grades 3 through 9 designed to do?

A. These assessments measure students' mastery of the Indiana Academic Standards in English/Language Arts and Mathematics taught in the grade levels **prior** to Grades 3 through 9. They are part of a statewide testing program designed to connect student learning, classroom instruction, school improvement, and educational goals. *ISTEP+* results provide information about the strengths and weaknesses of individual students as well as aggregate data about school, district/corporation, and state performance. The test is designed to permit inferences about student achievement in the critical knowledge and skill areas defined by Indiana's Academic Standards and to evaluate curriculum choices and instructional strategies made by schools and school corporations. It is **not** intended that grade-level curricula be restricted to the content of this test. The required criterion-referenced test consists of two parts: the Basic Skills Assessment (multiple-choice items) and the Applied Skills Assessment (open-ended items).

Q. What are the Indiana Academic Standards?

A. In collaboration with state K–12 educators, the Indiana State Board of Education has adopted world-class standards for each grade level in English/Language Arts and Mathematics. These learning outcomes require that Indiana schools have rigorous curricula aligned with state standards and that students learn the skills and knowledge deemed necessary for successful performances in school, at work, and in the community. *ISTEP+* testing for Grades 3 through 9 is based on the academic standards from **previous** school years. For example, testing in Grade 3 measures mastery of Indiana Academic Standards for Grades K–2, Grade 4 measures K–3 standards, and Grade 5 measures K–4 standards, etc. While these standards set expectations for student learning, they do not prescribe how the standards should be taught. Teachers should use their considerable skills, experience, talents, and creative resources to design standards-based classroom instructional activities tailored to meet the individual needs of their students. Copies of the *Teacher's Edition of Indiana's Academic Standards* have been forwarded to all school administrators and teachers.

Q. In what ways are *ISTEP+* results linked to state and federal accountability?

A. Indiana is required by state and federal law to administer a statewide assessment program that systematically measures student performance and monitors progress toward pre-established goals by all schools. *ISTEP+* results are a primary component for educational accountability under both Public Law 221 (state) and No Child Left Behind Act (federal). Testing data are also used to inform local decision making and guide Continuous School Improvement initiatives.

Q. How are test items created for this assessment? How does Indiana ensure that the test items are valid and unbiased for our students?

A. Since 1987, in conjunction with a test development company (CTB/McGraw-Hill), Indiana educators have collaborated in all steps of the test design and item development process. Indiana teachers help determine how standards will be tested by providing to the test developer assessment guidelines for the standards. Teachers review and approve all reading passages prior to the construction of test items and

review all test items to ensure that they are developmentally appropriate for the grade level and that they accurately measure the standards they were designed to assess. After additional reviews by the Citizens Review Committee and the Sensitivity Review Committee, items are evaluated on a pilot test form administered to Indiana students. Only items approved through these measures will appear on the actual *ISTEP+* assessments.

Q. How are test items scored?

- A. Multiple-choice (selected-response) items are scored by machine in Salinas, California. Open-ended (constructed-response) items are read and electronically scored in Indianapolis by trained scorers. Scores on these items are based on correct answers as well as on level of understanding and ability to communicate. Rubrics guide scorers in assigning scores on the writing prompts and the open-ended items. Each rubric contains a list of acceptable responses (exemplars) as well as a description of the level of performance for each score point. If a student gives a response that is not listed as an exemplar but is supported by the text, the student receives credit for the response. Anchor papers are selected for each designated score point of an item. These are used as guides for the scorers in scoring the applied skills sections.

Q. How does Indiana ensure that scoring is reliable?

- A. Potential scorers, who must be college graduates and meet other competitive qualification requirements, are screened carefully during two interviews. Once selected, scorers train for several days with actual student responses from item pilots and must pass a test before they begin to score “live” student responses. The scorers must continue to demonstrate proficiency in following established scoring guidelines throughout their terms of employment. To ensure that grading by all scorers consistently matches the guidelines established in the scoring rubric, the trained scorers are monitored closely by testing supervisors. Each scorer is administered a “checkset” (a set of pre-scored student responses) several times a day that compares his or her grades to those assigned by the supervisor. In addition, the team leader, who works with a team of nine scorers, randomly rescores a percentage of each scorer’s completed items. Finally, 5% of the total responses are rescored daily to ensure scorer reliability.

Q. What is the policy regarding rescoring items?

- A. Within a specified window of time, a student’s parent or guardian may request a rescoring of specific items from a student’s test, including the writing prompts. It should be stressed that the scores obtained through the rescoring will be final and that the rescoring may have positive, negative, or no effect on the final score. Scores resulting from rescoring items are unlikely to be more than a few points different from the original score.

Q. What practices are appropriate when *preparing* students for *ISTEP+*?

- A. It is important that students anticipate the tests with interest rather than with anxiety. They should realize that they are taking achievement tests that yield information

about the skills they have mastered as well as the skills they need to learn. Point out that questions intentionally cover a range of difficulty. The Department of Education's (DOE) policy about test preparation is that **any activity in the school or classroom that creates an excessive focus on the specific test content of *ISTEP+* for the purpose of artificially raising test scores, whether overt or inadvertent, is inappropriate.** The *Indiana Code of Ethical Testing Practices and Procedures* was created to assist in answering specific questions about what constitutes "excessive focus." This document has been distributed to schools and corporations and may be downloaded from the DOE Web site. For easy reference, the following is a summary of ethical practices.

It is considered **appropriate** to do the following:

- review with all students the skills and concepts, including those unique to English/ Language Arts and Mathematics, taught in previous years (see classroom activities in *Curriculum Frameworks*)
- review *ISTEP+* objectives as part of a general review of curricula
- discuss general test-taking strategies and have students complete the *ISTEP+* practice tests that are included with regular materials at a time suggested by the *ISTEP+ Examiner's Manual*
- talk with students and parents about academic expectations and the importance of setting specific performance goals that enable students to assume responsibility for their learning
- develop instructional objectives based on the Indiana Academic Standards
- use test results as part of a body of evidence in making informed decisions about individuals, educational programs, or curriculum

It is considered **inappropriate** to do the following:

- teach or "cram" *ISTEP+* content (that has not been previously covered) during the time period immediately preceding the examination
- call students' attention to the fact that a similar question will be on the upcoming *ISTEP+*
- review *ISTEP+* related skills and concepts with **only** those students to be tested
- select for review **only** those *ISTEP+* objectives or items on which students performed poorly on previous examinations or focus instructional objectives on specific test items
- copy test items for instructional use or make minor alterations in test items to construct study guides, worksheets, or classroom assessments specifically designed for test preparation purposes
- use current, past, or parallel *ISTEP+* test items as review materials except those authorized for such use by the DOE (the released applied skills items found in the *Teacher's Scoring Guides* for Grades 3 through 9)

NOTE: Duplication of any part of the test books constitutes a serious breach of security as some test items may appear in future versions of the test. Exposing

students to test questions before testing invalidates test scores and denies students the opportunity to participate in testing.

Q. What practices are considered inappropriate *during* testing?

- A.**
- coaching students in any way (verbally or with gestures or facial expressions)
 - using any mechanical or technical device during a session **not** approved for such use, except by students for whom such use is an authorized IEP accommodation
 - answering questions about test items or vocabulary
 - the reading of *passages* to any students in the English/Language Arts *ISTEP+* tests is **not** allowed. Test *directions* and test *items* on any *ISTEP+* test may be read aloud only to students with an IEP or 504 Plan that allows such an accommodation.
 - allowing noncertified personnel (e.g., aides or parent volunteers) to administer the test. Noncertified personnel, however, may serve as test proctors.

Q. How do I access more information about *ISTEP+* and other test-support resources?

- A.** The Department of Education maintains a Web site at **www.doe.state.in.us** that provides immediate access to *ISTEP+* information as well as to legislative updates and information about the Indiana Academic Standards, accountability, school improvement, and professional development. The *ISTEP+* Web page, accessible from this site, includes a calendar with upcoming test dates, bulletins with current testing information, and a list of *ISTEP+* support documents that may be downloaded. These documents include the *Guide to Test Interpretation*; the item samplers for Grades 3, 6, and 8, and the GQE; and the *ISTEP+ Program Manual*. **Multiple copies of *ISTEP+* support documents should be ordered through the school's Test Coordinator.**

Questions about assessment not answered in this sampler may be directed to Cynthia Roach (at **croach@doe.state.in.us**) or Kerry Hoffman (at **khoffman@doe.state.in.us**), Assessment Consultants. The School Assessment Division's telephone number is 317-232-9050, and the toll-free *ISTEP+* hotline is 888-544-7837 (888-54ISTEP).



English/Language Arts

GRADE 8 INDIANA ACADEMIC STANDARDS

- ❑ **READING: Word Recognition, Fluency, and Vocabulary Development**
Students use their knowledge of word parts and word relationships, as well as context clues (the meaning of the text around a word), to determine the meaning of specialized vocabulary and to understand the precise meaning of grade-level-appropriate words.
- ❑ **READING: Reading Comprehension**
Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. In addition to regular classroom reading, students read a variety of narrative (story) and expository (informational and technical) texts, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.
- ❑ **READING: Literary Response and Analysis**
Students read and respond to grade-level-appropriate historically or culturally significant works of literature that reflect and enhance their study of history and social science. They clarify the ideas and connect them to other literary works.
- ❑ **WRITING: Writing Process**
Students discuss, list, and graphically organize writing ideas. They write clear, coherent, and focused essays. Students progress through the stages of the writing process and proofread, edit, and revise writing.
- ❑ **WRITING: Writing Applications**
Students continue to write narrative (story), expository (informational), persuasive, and descriptive essays of at least 750 to 1,000 words. Students are introduced to writing technical documents. Student writing demonstrates a command of Standard English and the research, organizational, and drafting strategies outlined in Standard 4—Writing Process. Writing demonstrates an awareness of the audience (intended reader) and purpose for writing.
- ❑ **WRITING: Written English Language Conventions**
Students write using Standard English conventions appropriate to this grade level.
- ❑ **LISTENING AND SPEAKING: Listening and Speaking Skills, Strategies, and Applications**
Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication. Students deliver well-organized formal presentations using traditional speech strategies, including narration, exposition, persuasion, and description. Students use the same Standard English conventions for oral speech that they use in their writing.
(Because this standard does not lend itself to a paper-and-pencil test, it is not currently assessed by ISTEP+.)

NOTE: This page provides an overview of the Indiana Academic Standards. The IDOE Web site at www.doe.state.in.us contains a complete version of the Indiana Academic Standards, which may be downloaded.

The Hoosier City Megaplex

Hoosier City Megaplex
250 Main Highway (behind Hoosier City Mall)
Hoosier City, IN 40050
Office 555-4321

www.hoosiermegaplex.com



Directions



Showtimes Today



Mini-Reviews



Download Previews



Coming Attractions



Film Ratings



Theater Policies



Feature Presentations

All bargain matinee shows start before 5 p.m.

- **For Sale: The Brooklyn Bridge (PG-13)**
10:30, 12:00, 1:30, 3:00, 4:30, 6:10, 7:30, 9:10, 10:40
- **Tide Rider (PG-13)**
10:35, 11:50, 1:10, 2:10, 3:50, 4:50, 6:30, 7:40, 9:00, 10:30
- **It Happened In Argentina (PG)**
10:40, 12:30, 1:20, 4:00, 6:00, 6:40, 8:40, 9:30
- **Bird Brains (G)**
10:50, 1:40, 4:25, 7:20, 10:00
- **Creepy Movie XIV (R)**
11:00, 1:50, 4:20, 6:50, 9:20
- **Silly Saturday (PG-13)**
11:20, 2:20, 5:00, 7:50, 10:10
- **Pokefun 8 (PG-13)**
12:20, 3:40, 7:00, 10:20

Gold Rushes of the American West



Two of the most exciting events in the settlement of the American West were gold rushes in California and Alaska. Gold was first discovered in California in 1848 at John Sutter's sawmill, located near what is now Sacramento. Thousands of prospectors, known as 49ers, descended on California in hopes of striking it rich. Although a few prospectors made as much as \$2,000 a day, most people found little or no gold. Nevertheless, the gold rush fueled a population boom in California, leading it to statehood in 1850.

Nearly fifty years later, in 1897, another gold rush began in Canada's Yukon Territory. It soon moved west into Alaska. More than 100,000 people made the journey to the frozen, unsettled territory. Searching for gold in Alaska proved to be much more dangerous than searching in California. The Alaskan wilderness was guarded by mountains, and winter temperatures regularly dropped to -50 degrees Fahrenheit. As a result, Alaska grew more slowly than did California. Alaska did not become a state until 1959.

The Calculating Countess



Cyberkids everywhere have Ada Byron Lovelace to thank when they log on to their computers. Lady Lovelace, a Victorian countess, was the first computer programmer. She wrote the very first computer language over one hundred and fifty years ago—an amazing feat, considering that computers had not yet been built.

Ada Byron was born in London, England, on December 10, 1815, to the famous poet Lord Byron, and his wife, Lady Byron. Growing up, Ada enjoyed dancing, gymnastics, horseback riding, and playing musical instruments—all common pastimes for girls of her day. Ada had another interest, however, that was not so common. Machines fascinated her; she loved figuring out what made them work.

As a teenager, Ada became very ill and was bedridden for almost three years. Although this sounds like a terrible tragedy, Ada used this time to her advantage. Rather than

feeling sorry for herself and becoming bored, Ada studied instead. Her mother hired mathematicians and scientists to tutor her. Thus began her lifelong love of mathematics.

Years later, Ada married Lord William King Lovelace. They had three children together, but Ada did not give up her love of math and science. With the support of her family, she became a mathematician, a career frowned upon for women by nineteenth-century society.

Ada's work was greatly influenced by Charles Babbage, an inventor. His proposed Analytical Engine captured Ada's interest. It was to have weighed two tons and be composed of gears, cranks, and rods. Like today's computer, it was intended to store a program (a sequence of instructions) as well as data (information). Unfortunately, it was never built. That, however, did not stop Lady Lovelace from

creating a language that would have made the Analytical Engine work. She thought that numbers and other symbols, such as letters of the alphabet, could be “coded” as numerical data that the machine would then be able to read and process as written material. Ada wrote a plan describing how the Analytical Engine might calculate certain numbers. This plan is thought of as the first “computer program,” an important advancement, since modern computers rely on programming (instructions telling the machine what the user wants).

Ada Byron Lovelace was far ahead of her time. Not only did she come up with basic programming concepts, she also predicted the machine’s

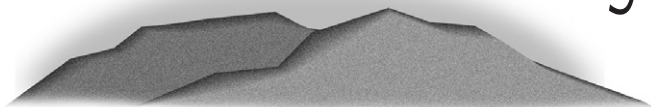
future uses. She thought that someday it could be used to make music and draw pictures. Although it took more than a century for her predictions to come true, today’s computers do indeed do both.

In 1979, to honor her memory and contributions, the United States Department of Defense commissioned a new software language and named it ADA. Based on the computer language PASCAL, it was designed to be efficient, yet easy to use.

Ada once said, “I hope before I die to throw light on some of the dark things of the world.” As an early pioneer in a technology that has affected millions of people, Ada certainly achieved that and much more.



Smoky Mountain Morning



Mist, white and cotton-wet,
Threads the willow branch and strums the rocky stream with
chilly fingers,
Playing a tune of murmured good mornings.
The trail carries me upward, over ant-blistered logs and
a quilt of burnished autumn's leaves
That glimmer with dew and welcome the first swirls of
morning's light through the canopy of poplar branches.
Birds' songs tangle in the air, the shrill, the sweet;
various melodies vying for center stage.
A breeze stirs the spiders' webs in the rhododendrons,
tossing filament and fuzzy legs about like gossamer
sails and fearless topsmen.
Leaves spin and flutter, some leap free in a spray, others
await their turn,
Tomorrow.
Eyes in the shadows follow my trek,
White-tailed deer and trundling woodchuck, slimy salamander
and chipmunk;
Children of the Wood, keepers of the secrets of the pine and
oak.
Up I trudge, stamping the path with the tip of my hiking
cane,
Pressing the earth with my mark,
Knowing a simple mountain shower will wash it away and leave
no trace of my visit
Save the echoes of my wonder,
The whisper of my awe.



Pompeii



For four days, Gaius Plinius Secundus, known as “Pliny the Elder,” had felt the earth rumble and watched huge waves pound the coast along the Bay of Naples, but the Roman naval commander banished worry from his mind. Escaping summer’s heat with family members at a beachfront villa near the Sarno River, Pliny was surrounded by sunny vineyards and orchards. His fleet of oar-powered warships quietly rode anchor nearby. Twenty miles across the bay, Mount Vesuvius towered majestically above the towns of Pompeii, Herculaneum, and Stabiae.

Relaxing with Pliny on the 24th day of August, A.D. 79, was his seventeen-year-old nephew, “Pliny the Younger.” After a leisurely morning and long lunch, the elder Pliny lay down to read. A learned writer as well as a naval

commander, he also gave his nephew a writing assignment for the day.

Early in the afternoon, the commander noticed an ominous cloud of white smoke, shaped like a tree trunk with spreading branches, rising over Pompeii. Intent on investigating what looked like an explosion, he ordered a boat prepared and invited his nephew to join him. Young Pliny declined, wanting to finish his studies.

As the commander hurried to leave, he met a messenger arriving from Pompeii with a frantic note from a friend’s wife. The frightened woman was trapped in her villa and begged Pliny to help her escape. Peaceful Mount Vesuvius was erupting.

A rescue fleet was immediately launched, with hopes of crossing the bay in time. As the ship sailed closer to the volcano, the air became dark, thick with falling ash. Pliny’s uneasy helmsman urged him to turn back. He refused, putting the lives of his fellow Roman citizens ahead of his own. But when he found chunks of lava and debris blocking Pompeii’s shore, Pliny was forced to head for Stabiae.

(continued on page 18)

In Stabiae, the layers of ash and rock rose quickly, threatening Pliny and his companions. At daybreak, they tried to escape by sea. Covering their heads with pillows as protection against the shower of burning stones, they carried torches to light their way through the dark cloud of ashes. Although the group reached the safety of the shoreline, Pliny was overcome by fumes and died.

That same day, Pliny the Younger—still at the resort—watched in amazement as the sea retreated, leaving many sea creatures gasping on dry land. His mother begged him to run for his life, but Pliny refused to leave without her. Holding hands, they

joined a fleeing crowd when darkness suddenly overtook them.

Through the gloom of ash, they saw a strange wall of light following them. Pliny realized to his horror that the shimmering glare shone from flames. Fortunately, the fire stopped in the distance, leaving the terrified fugitives again in the dark, struggling to shake off the weight of the thick, falling ash.

At last, pierced by the sun's eerie glow, the blackness thinned. A stunned Pliny saw the once-familiar landscape buried in ash. With other exhausted survivors, he and his mother struggled back to their villas to rebuild their lives.



Sample Test Items

READING: Word Recognition, Fluency, and Vocabulary Development

Using their knowledge of word parts, word relationships, and the text that surrounds the unknown word or phrase, students are able to discern the meaning of unfamiliar words and to interpret idiomatic phrases or comparisons. Given appropriate context, students are also able to choose the correct meaning for a word with several definitions, as well as understand the influence of historical events on the development of language. These skills can be assessed by either multiple-choice items or constructed-response items.

Numbers 1 and 2 are based on "The Calculating Countess," found on pages 14 and 15.

- 1** The title of this article is "The Calculating Countess." Look at the four definitions of *calculating* below. Using information from the article, choose the two definitions that show the play on words used in the title.

- A. shrewd
- B. solving a problem
- C. estimating a response
- D. scheming

- ☒ definitions A and B
- ☐ definitions B and C
- ☐ definitions C and D
- ☐ definitions A and D

- 2** Read this sentence from the article.

Ada once said, "I hope before I die to throw light on some of the dark things of the world."

What is the meaning of the phrase "to throw light"?

- ☐ bestow an honor
- ☐ develop a process
- ☐ create a new language
- ☒ discover a solution

Number 3 is based on "Pompeii," found on pages 17 and 18.

3 Read this sentence from the passage.

For four days, Gaius Plinius Secundus, known as "Pliny the Elder," had felt the earth rumble and watched huge waves pound the coast along the Bay of Naples, but the Roman naval commander banished worry from his mind.

In this sentence, *banished* means the SAME as

- ☐ invited
- ☐ persuaded
- ☒ removed
- ☐ summoned

READING: Reading Comprehension

Students are expected to read and understand a variety of material, both narrative (story) and expository (informational and technical). Reading comprehension skills include the ability to describe and connect the key ideas presented in the text and understand how the writer has organized them. Students are also asked to use and critique information presented in a user-oriented document, such as a flyer, application, or Web page. These skills can be assessed by either multiple-choice or constructed-response items.

Numbers 4 through 6 are based on "The Hoosier City Megaplex," found on page 12.

4 Which Web site subtopic would BEST assist a person in understanding the intended audience for a particular film?

- ☐ Mini-Reviews
- ☐ Coming Attractions
- ☒ Film Ratings
- ☐ Theater Policies

5 The feature presentations are listed by

- ☐ length
- ☐ rating
- ☒ start time
- ☐ title

6 The Hoosier City Megaplex Web site would be more user-friendly if it included information about

- ☐ other theaters
- ☐ past presentations
- ☐ starring actors
- ☒ ticket prices

Number 7 is based on "The Calculating Countess," found on pages 14 and 15.

7 In which of these books would someone MOST LIKELY find more information about Babbage's Analytical Engine?

- ☐ *The Software Industry Today*
- ☒ *A History of Computers*
- ☐ *Computers of the Twenty-First Century*
- ☐ *Basic Programming for Classrooms*

Numbers 8 and 9 are based on “Gold Rushes of the American West,” found on page 13.

8 Which of these BEST states the main idea of “Gold Rushes of the American West”?

- ☐ The discovery of gold had the same effect on both the Alaska and California territories.
- ☐ Gold was discovered earlier in California, so it became a state more quickly than Alaska.
- ☒ Although gold was discovered in both places, a better climate helped California develop more quickly than Alaska.
- ☐ California became a state soon after its gold rush, but Alaskan statehood happened 50 years after its gold was discovered.

9 Life for gold prospectors was often challenging. List TWO different details the author provides that support this statement.

- 1) _____

- 2) _____

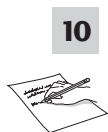
Exemplars:

- “Although a few prospectors made as much as \$2,000 a day, most people found little or no gold.”
- Searching for gold in Alaska was dangerous/difficult due to the cold winter temperatures.
- The Alaskan wilderness was guarded by mountains.
- other relevant text-based response

Rubric:

- 2 points** versions of two exemplars
- 1 point** version of one exemplar
- 0 points** other

Number 10 is based on “The Calculating Countess,” found on pages 14 and 15.



- 10** The author of “The Calculating Countess” writes that the computer programming language ADA was named after Ada Byron Lovelace. Do you think that ADA was a good choice for the name of this programming language? Why or why not?

Write an essay in which you explain whether you believe naming a computer programming language after Ada Byron Lovelace was a good idea. **In your essay, be sure to include at least TWO specific details from “The Calculating Countess” to support your opinion.**

SCORED FOR READING

Exemplars:

Yes

- She was the first computer programmer.
- She wrote the first computer language. “Ada wrote a plan describing how the Analytical Engine might calculate certain numbers.”
- Despite obstacles, she devoted her life to being a mathematician.
- She created a language that could have made Charles Babbage’s Analytical Engine work.
- “She thought that numbers and other symbols . . . could be ‘coded’ as numerical data.”
- She predicted future computer uses (like making music and drawing pictures).
- other relevant text-based detail

NOTE: Student may also receive full credit for expressing a “No” opinion provided that adequate text-based support is included in the response.

ALSO SCORED FOR WRITING

Apply 4-point Writing Applications Rubric, Grades 6–12

Apply 4-point Language Conventions Rubric, Grades 9–12

Reading Comprehension Rubric:

- 2 points** response includes two specific supporting details from the article
- 1 point** response includes one specific supporting detail from the article
- 0 points** other

Extended Response Writing Applications Overview

Grades 6–12

Score	Does the writing sample
4	<ul style="list-style-type: none"> • fully accomplish the task? • include many relevant ideas? • organize ideas logically? • exhibit very good word usage? • demonstrate very good writing technique? • demonstrate effective adjustment of language and tone to task and reader?
3	<ul style="list-style-type: none"> • accomplish the task? • include relevant ideas? • organize ideas logically? • exhibit good word usage? • demonstrate good writing technique? • demonstrate an attempt to adjust language and tone to task and reader?
2	<ul style="list-style-type: none"> • minimally accomplish the task? • include some relevant ideas? • exhibit an attempt to organize ideas logically? • exhibit ordinary word usage? • demonstrate adequate writing technique? • demonstrate an attempt to adjust language and tone to task and reader?
1	<ul style="list-style-type: none"> • only partially accomplish or fail to accomplish the task? • include few relevant ideas? • exhibit a minimal attempt to organize ideas logically? • exhibit minimal word usage? • demonstrate minimal or less than minimal writing technique? • demonstrate language and tone that may be inappropriate to task and reader?

NOTE: This chart is only a brief summary of the score points. It is not appropriate to use this summary as the sole tool in scoring student papers. The more in-depth Extended Response Writing Applications Rubric is used for the actual scoring of *ISTEP+* student papers.

These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Extended Response Writing Applications Rubric

Grades 6–12

SCORE POINT 4
A Score Point 4 paper represents a solid performance. It fully accomplishes the task.
Ideas and Content
<p>Does the writing sample fully accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • present a unifying theme or main idea without going off on tangents? • stay focused on topic and task? <p>Does the writing sample include many relevant ideas? Does it</p> <ul style="list-style-type: none"> • provide ample information and more than adequate supporting details that are developed? • explore many facets of the topic?
Organization
<p>Are the ideas in the writing sample organized logically? Does the writing</p> <ul style="list-style-type: none"> • present a meaningful, cohesive whole with a beginning, a middle, and an end (i.e., include a solid introduction and conclusion)? • progress in an order that enhances meaning of text? • include smooth transitions (e.g., use topic sentences) between sentences and paragraphs to enhance meaning of text? (Writing may have an occasional lapse.)
Style
<p>Does the writing sample exhibit very good word usage? Does it</p> <ul style="list-style-type: none"> • include vocabulary to make explanations detailed and precise, descriptions rich, and actions clear and vivid? • demonstrate control of vocabulary? <p>Does the writing sample demonstrate very good writing technique?</p> <ul style="list-style-type: none"> • Is the writing very fluent? • Does it include varied sentence patterns, including complex sentences? • Does it demonstrate use of writer's techniques (e.g., literary conventions such as imagery and dialogue and/or literary genres such as humor and suspense)?
Voice
<p>Does the writing sample demonstrate effective adjustment of language and tone to task and reader? Does it</p> <ul style="list-style-type: none"> • exhibit appropriate register (e.g., formal, personal, or dialect) to suit task? • demonstrate a sense of audience? • exhibit an original perspective (e.g., authoritative, lively, and/or exciting)?

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Extended Response Writing Applications Rubric

Grades 6–12

SCORE POINT 3
<p>A Score Point 3 paper represents a good performance. It accomplishes the task, but generally needs to exhibit more development, better organization, or a more sophisticated writing style to receive a higher score.</p>
<p>Ideas and Content</p> <p>Does the writing sample accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • present a unifying theme or main idea? (Writing may include minor tangents.) • stay mostly focused on topic and task? <p>Does the writing sample include relevant ideas? Does it</p> <ul style="list-style-type: none"> • include sufficient information and supporting details? (Details may not be fully developed; ideas may be listed.) • explore some facets of the topic?
<p>Organization</p> <p>Are the ideas in the writing sample organized logically? Does the writing</p> <ul style="list-style-type: none"> • present a meaningful whole with a beginning, a middle, and an end despite an occasional lapse (e.g., a weak introduction or conclusion)? • generally progress in an order that enhances meaning of text? • include transitions between sentences and paragraphs to enhance meaning of text? (Transitions may be rough, although some topic sentences are included.)
<p>Style</p> <p>Does the writing sample exhibit good word usage? Does it</p> <ul style="list-style-type: none"> • include vocabulary that is appropriately chosen, with words that clearly convey the writer's meaning? • demonstrate control of basic vocabulary? <p>Does the writing sample demonstrate good writing technique?</p> <ul style="list-style-type: none"> • Is the writing fluent? • Does it exhibit some varied sentence patterns, including some complex sentences? • Does it demonstrate an attempt to use writer's techniques (e.g., literary conventions such as imagery and dialogue and/or literary genres such as humor and suspense)?
<p>Voice</p> <p>Does the writing sample demonstrate an attempt to adjust language and tone to task and reader? Does it</p> <ul style="list-style-type: none"> • generally exhibit appropriate register (e.g., formal, personal, or dialect) to suit task? (The writing may occasionally slip out of register.) • demonstrate some sense of audience? • attempt an original perspective?

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Extended Response Writing Applications Rubric

Grades 6–12

SCORE POINT 2
<p>A Score Point 2 paper represents a performance that minimally accomplishes the task. Some elements of development, organization, and writing style are weak.</p>
<p>Ideas and Content</p> <p>Does the writing sample minimally accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • attempt a unifying theme or main idea? • stay somewhat focused on topic and task? <p>Does the writing sample include some relevant ideas? Does it</p> <ul style="list-style-type: none"> • include some information with only a few details, or list ideas without supporting details? • explore some facets of the topic?
<p>Organization</p> <p>Is there an attempt to logically organize ideas in the writing sample? Does the writing</p> <ul style="list-style-type: none"> • have a beginning, a middle, or an end that may be weak or absent? • demonstrate an attempt to progress in an order that enhances meaning? (Progression of text may sometimes be unclear or out of order.) • demonstrate an attempt to include transitions? (Are some topic sentences used? Are transitions between sentences and paragraphs weak or absent?)
<p>Style</p> <p>Does the writing sample exhibit ordinary word usage? Does it</p> <ul style="list-style-type: none"> • contain basic vocabulary, with words that are predictable and common? • demonstrate some control of vocabulary? <p>Does the writing sample demonstrate adequate writing technique?</p> <ul style="list-style-type: none"> • Is the writing generally fluent? • Does it contain mostly simple sentences (although there may be an attempt at more varied sentence patterns)? • Is it generally ordinary and predictable?
<p>Voice</p> <p>Does the writing sample demonstrate an attempt to adjust language and tone to task and reader? Does it</p> <ul style="list-style-type: none"> • demonstrate a difficulty in establishing a register (e.g., formal, personal, or dialect)? • demonstrate little sense of audience? • generally lack an original perspective?

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Extended Response Writing Applications Rubric

Grades 6–12

SCORE POINT 1	
<p>A Score Point 1 paper represents a performance that only partially accomplishes or fails to accomplish the task. Some responses may exhibit difficulty maintaining a focus. Others may be too brief to provide sufficient development of the topic or evidence of adequate organizational or writing style.</p>	
Ideas and Content	
<p>Does the writing sample only partially accomplish or fail to accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)?</p> <ul style="list-style-type: none"> • Writing may attempt a main idea, or the main idea may be difficult to discern. • Does the writing sometimes lose focus or ineffectively establish focus? <p>Does the writing sample include few relevant ideas?</p> <ul style="list-style-type: none"> • Does the writing sample include little information and few or no details? • Writing may explore only one or two facets of the topic. 	
Organization	
<p>Is there a minimal attempt to logically organize ideas in the writing sample?</p> <ul style="list-style-type: none"> • Does the writing have only one or two of the three elements: beginning, middle, and end? • Is the writing sometimes difficult to follow? (Progression of text may be confusing, unclear, or difficult to discern.) • Are transitions weak or absent (e.g., few or no topic sentences)? 	
Style	
<p>Does the writing sample exhibit minimal word usage? Does it</p> <ul style="list-style-type: none"> • contain limited vocabulary? (Words may be used incorrectly.) • demonstrate minimal or less than minimal control of vocabulary? <p>Does the writing sample demonstrate minimal or less than minimal writing technique?</p> <ul style="list-style-type: none"> • Does the writing exhibit some or little fluency? • Does it rely mostly on simple sentences or demonstrate problems with sentence patterns? • Is it often repetitive, predictable, or dull? 	
Voice	
<p>Does the writing sample demonstrate language and tone that may be inappropriate to task and reader? Does it</p> <ul style="list-style-type: none"> • demonstrate use of a register inappropriate to the task (e.g., slang or dialect in a formal setting)? • demonstrate little or no sense of audience? • lack an original perspective? 	

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Language Conventions Rubric

Grades 9–12

Students will apply to their writing the Standard English conventions defined in the Indiana Academic Standards for their grade and for all previous grades.

Score	Does the writing sample exhibit a superior command of language skills?
4	<p>A Score Point 4 paper exhibits a superior command of written English language conventions. The paper provides evidence that the student has a thorough control of the concepts outlined in the Indiana Academic Standards associated with the student's grade level. In a Score Point 4 paper, there are no errors that impair the flow of communication. Errors are generally of the first-draft variety or occur when the student attempts sophisticated sentence construction.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a superior command of capitalization conventions? • Does the writing sample demonstrate a superior command of the mechanics of punctuation? • Does the writing sample demonstrate a superior command of grade-level-appropriate spelling? • Does the writing sample demonstrate a superior command of grammar and Standard English usage? • Does the writing sample demonstrate a superior command of paragraphing? • Does the writing sample demonstrate a superior command of sentence structure by not using run-on sentences or sentence fragments?
Score	Does the writing sample exhibit a good control of language skills?
3	<p>In a Score Point 3 paper, errors are occasional and are often of the first-draft variety; they have a minor impact on the flow of communication.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a good control of capitalization conventions? • Does the writing sample demonstrate a good control of the mechanics of punctuation? • Does the writing sample demonstrate a good control of grade-level-appropriate spelling? • Does the writing sample demonstrate a good control of grammar and Standard English usage? • Does the writing sample demonstrate a good control of paragraphing? • Does the writing sample demonstrate a good control of sentence structure by only occasionally using run-on sentences or sentence fragments?
Score	Does the writing sample exhibit a fair control of language skills?
2	<p>In a Score Point 2 paper, errors are typically frequent and may occasionally impede the flow of communication.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a fair control of capitalization conventions? • Does the writing sample demonstrate a fair control of the mechanics of punctuation? • Does the writing sample demonstrate a fair control of grade-level-appropriate spelling? • Does the writing sample demonstrate a fair control of grammar and Standard English usage? • Does the writing sample demonstrate a fair control of paragraphing? • Does the writing sample demonstrate a fair control of sentence structure by frequently using run-on sentences or sentence fragments?
Score	Does the writing sample exhibit a minimal or less than minimal control of language skills?
1	<p>In a Score Point 1 paper, errors are serious and numerous. The reader may need to stop and reread part of the sample and may struggle to discern the writer's meaning.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a minimal control of capitalization conventions? • Does the writing sample demonstrate a minimal control of the mechanics of punctuation? • Does the writing sample demonstrate a minimal control of grade-level-appropriate spelling? • Does the writing sample demonstrate a minimal control of grammar and Standard English usage? • Does the writing sample demonstrate a minimal control of paragraphing? • Does the writing sample demonstrate a minimal control of sentence structure by using many run-on sentences or sentence fragments?

NOTE: The elements of this rubric are applied holistically; no element is intended to supersede any other element. The variety and proportion of errors in relation to the length of the writing sample are considered. A very brief paper consisting of two or three sentences may receive no more than 2 score points.

These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 9–12.

READING: Literary Response and Analysis

Students are expected to understand the plots, characters, settings, and themes of the works they read, how these literary elements work together within the text, and how they create an impression on the reader. Students should be able to analyze works with similar elements and describe similarities and differences in the treatment of those elements in these works. In addition, given sufficient background information, students should be able to relate a literary character or an author to the historical setting of a passage. These skills can be assessed by either multiple-choice or constructed-response items.

Numbers 11 and 12 are based on “Pompeii,” found on pages 17 and 18.

11 Which of these **FIRST** caused Pliny the Elder to leave his vacation and sail toward Pompeii?

- ☐ the arrival of a note from his friend's wife in Pompeii
- ☐ wanting to reach Pompeii before the volcano erupted
- ☒ the sight of a large amount of smoke rising in the sky across the bay
- ☐ seeing the weather change and knowing the bay would be rough

12 Which of the following **BEST** describes the tone of the opening paragraph?

- ☐ celebratory
- ☐ frenzied
- ☐ hysterical
- ☒ suspenseful

Number 13 is based on “Smoky Mountain Morning,” found on page 16.

13 “Smoky Mountain Morning” is an example of which form of poetry?

- ☐ ballad, a poem that tells a story
- ☐ epic, a poem describing heroic deeds or adventures
- ☒ lyric, a poem of personal feelings or emotions
- ☐ ode, a poem in praise of a person

Numbers 14 and 15 are based on “The Calculating Countess,” found on pages 14 and 15.

14 Which of these themes is MOST developed in “The Calculating Countess”?

- ☐ Machines can make everyday work faster and easier.
- ☒ Inventors can create things long before they become useful.
- ☐ Women in the nineteenth century had few employment options.
- ☐ Children in the nineteenth century engaged in many outdoor activities.

15 Read this sentence.

Although this sounds like a terrible tragedy, Ada used this time to her advantage.

What was the tragedy, and how did it become an opportunity for Ada? Use specific details from “The Calculating Countess” to complete the chart below.

What the tragedy was	How it became an opportunity for Ada

Exemplars:

<ul style="list-style-type: none">• <i>Ada became ill when she was a teenager.</i>• <i>Ada had to stay in bed for almost three years.</i>• <i>other relevant text-based response</i>	<ul style="list-style-type: none">• <i>She used the time to study math and science.</i>• <i>She developed a lifelong interest in math and science.</i>• <i>other relevant text-based response</i>

Rubric:

2 points version of one exemplar for each part

1 point version of one exemplar for one part only

0 points other

WRITING: Writing Process

Students are expected to discuss, list, and organize writing ideas in order to produce clear, coherent, and focused essays. In their writing, students should be able to use transitions between sentences and paragraphs, and provide support for statements and claims. After writing, they are expected to proofread, edit, and revise their writing. Students should also be able to use computers to conduct information searches and to create documents. The *ISTEP+* assesses a student's ability to meet selected skills in this standard through the use of multiple-choice items as well as by the application of the Language Conventions Rubric (see page 29) to extended student writing.

16 Here are four sentences that must be rearranged in order to create a logical paragraph.

1. When the lower bill touches a fish, the bill shuts automatically, and the fish is caught.
2. One such bird is the black skimmer, which lives on the eastern shores of North America.
3. For some birds, the nerves in their bills help them find fish to eat.
4. This bird's lower bill is much longer than its upper bill and can easily skim the surface of the water.

Which of the following shows the correct order of the sentences?

- ☐ 1, 2, 3, 4
- ☐ 2, 4, 3, 1
- ☒ 3, 2, 4, 1
- ☐ 4, 1, 3, 2

17 Read these sentences.

Katherine Blodgett invented modern eyeglasses.

Katherine Blodgett was the first woman to graduate with a doctorate in physics from Cambridge University, a school in England.

Which of the following is the BEST way to combine the two sentences?

- ☐ The inventor of modern eyeglasses, was the first woman to graduate with a doctorate in physics, Katherine Blodgett, from a school in England, Cambridge University.
- ☐ The inventor of modern eyeglasses, at Cambridge University, a school in England, Katherine Blodgett was the first woman to graduate with a doctorate in physics.
- ☒ Katherine Blodgett, the inventor of modern eyeglasses, was the first woman to graduate with a doctorate in physics from Cambridge University, a school in England.
- ☐ Katherine Blodgett, the first woman to graduate with a doctorate in physics, invented modern eyeglasses, from Cambridge University, a school in England.

WRITING: Writing Applications

In response to a writing prompt, students must organize their ideas and produce an original narrative or composition. The type of writing required for *ISTEP+* rotates among the following forms: narrative (story), expository (informational), persuasive, and descriptive.

Each type of writing has specific characteristics that the student is expected to include. For example, a student's persuasive essay should organize ideas in a sustained and effective way, use specific writing devices to support assertions, state and defend a position with clear and relevant evidence, and address readers' concerns appropriately.

Student writing is evaluated according to the six-point rubric on pages 38 through 43. Students' ability to use Standard English in their writing is assessed using the four-point Language Conventions Rubric on page 44.

18

Time Capsule

Read the writing prompt below and complete the writing activity.

Your class is preparing a time capsule to put in the corner of your new school building so that students one hundred years from now will know what student life was like when you were in school. Each student will present one item for the capsule, and the entire class will vote on the final selections. What item would you choose to go into the time capsule?

Write a persuasive essay in which you try to convince your classmates that the item you have chosen should go into the time capsule. Your persuasive essay should point out why your item will show students in the future what student life was like when you were in school. Give strong, persuasive details to support your choice.

Be sure to include

- a description of the item
- why you chose the item
- how the item represents student life when you were in school
- strong, persuasive details to support your choice
- an introduction, a body, and a conclusion to your persuasive essay

Writing Applications Overview

Grades 6–12

Score Level	Ideas and Content	Organization
	Does the writing sample	Does the writing sample
6	<ul style="list-style-type: none"> fully accomplish the task? include thorough, relevant, and complete ideas? 	<ul style="list-style-type: none"> organize ideas logically?
5	<ul style="list-style-type: none"> fully accomplish the task? include many relevant ideas? 	<ul style="list-style-type: none"> organize ideas logically?
4	<ul style="list-style-type: none"> accomplish the task? include relevant ideas? 	<ul style="list-style-type: none"> organize ideas logically?
3	<ul style="list-style-type: none"> minimally accomplish the task? include some relevant ideas? 	<ul style="list-style-type: none"> exhibit an attempt to organize ideas logically?
2	<ul style="list-style-type: none"> only partially accomplish the task? include few relevant ideas? 	<ul style="list-style-type: none"> exhibit a minimal attempt to organize ideas logically?
1	<ul style="list-style-type: none"> fail to accomplish the task? include very few relevant ideas? 	<ul style="list-style-type: none"> organize ideas illogically?

NOTE: Chart continues on page 37.

This chart is only a brief summary of the score points. It is not appropriate to use this summary as the sole tool in scoring student papers. The more in-depth Writing Applications Rubric is used for the actual scoring of *ISTEP+* student papers.

These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Writing Applications Overview (cont.)

Grades 6–12

Score Level	Style	Voice
	Does the writing sample	Does the writing sample
6	<ul style="list-style-type: none"> exhibit exceptional word usage? demonstrate exceptional writing technique? 	<ul style="list-style-type: none"> demonstrate effective adjustment of language and tone to task and reader?
5	<ul style="list-style-type: none"> exhibit very good word usage? demonstrate very good writing technique? 	<ul style="list-style-type: none"> demonstrate effective adjustment of language and tone to task and reader?
4	<ul style="list-style-type: none"> exhibit good word usage? demonstrate good writing technique? 	<ul style="list-style-type: none"> demonstrate an attempt to adjust language and tone to task and reader?
3	<ul style="list-style-type: none"> exhibit ordinary word usage? demonstrate average writing technique? 	<ul style="list-style-type: none"> demonstrate an attempt to adjust language and tone to task and reader?
2	<ul style="list-style-type: none"> exhibit minimal word usage? demonstrate minimal writing technique? 	<ul style="list-style-type: none"> demonstrate language and tone that may be inappropriate to task and reader?
1	<ul style="list-style-type: none"> exhibit less than minimal word usage? demonstrate less than minimal writing technique? 	<ul style="list-style-type: none"> demonstrate language and tone that may be inappropriate to task and reader?

Writing Applications Rubric

Grades 6–12

SCORE POINT 6	
A Score Point 6 paper is rare. It fully accomplishes the task in a thorough and insightful manner and has a distinctive quality that sets it apart as an outstanding performance.	
Ideas and Content	
<p>Does the writing sample fully accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • present a unifying theme or main idea without going off on tangents? • stay completely focused on topic and task? <p>Does the writing sample include thorough, relevant, and complete ideas? Does it</p> <ul style="list-style-type: none"> • include in-depth information and exceptional supporting details that are fully developed? • fully explore many facets of the topic? 	
Organization	
<p>Are the ideas in the writing sample organized logically? Does the writing</p> <ul style="list-style-type: none"> • present a meaningful, cohesive whole with a beginning, a middle, and an end (i.e., include an inviting introduction and a strong conclusion)? • progress in an order that enhances meaning? • include smooth transitions between ideas, sentences, and paragraphs to enhance meaning of text (i.e., have a clear connection of ideas and use topic sentences)? 	
Style	
<p>Does the writing sample exhibit exceptional word usage? Does it</p> <ul style="list-style-type: none"> • include vocabulary to make explanations detailed and precise, descriptions rich, and actions clear and vivid (e.g., varied word choices, action words, appropriate modifiers, sensory details)? • demonstrate control of a challenging vocabulary? <p>Does the writing sample demonstrate exceptional writing technique?</p> <ul style="list-style-type: none"> • Is the writing exceptionally fluent? • Does it include varied sentence patterns, including complex sentences? • Does it demonstrate use of writer's techniques (e.g., literary conventions such as imagery and dialogue and/or literary genres such as humor and suspense)? 	
Voice	
<p>Does the writing sample demonstrate effective adjustment of language and tone to task and reader? Does it</p> <ul style="list-style-type: none"> • exhibit appropriate register (e.g., formal, personal, or dialect) to suit task? • demonstrate a strong sense of audience? • exhibit an original perspective (e.g., authoritative, lively, and/or exciting)? 	

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Writing Applications Rubric

Grades 6–12

SCORE POINT 5	
A Score Point 5 paper represents a solid performance. It fully accomplishes the task, but lacks the overall level of sophistication and consistency of a Score Point 6 paper.	
Ideas and Content	
<p>Does the writing sample fully accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • present a unifying theme or main idea without going off on tangents? • stay focused on topic and task? <p>Does the writing sample include many relevant ideas? Does it</p> <ul style="list-style-type: none"> • provide in-depth information and more than adequate supporting details that are developed? • explore many facets of the topic? 	
Organization	
<p>Are the ideas in the writing sample organized logically? Does the writing</p> <ul style="list-style-type: none"> • present a meaningful, cohesive whole with a beginning, a middle, and an end (i.e., include a solid introduction and conclusion)? • progress in an order that enhances meaning of text? • include smooth transitions (e.g., use topic sentences) between sentences and paragraphs to enhance meaning of text? (Writing may have an occasional lapse.) 	
Style	
<p>Does the writing sample exhibit very good word usage? Does it</p> <ul style="list-style-type: none"> • include vocabulary to make explanations detailed and precise, descriptions rich, and actions clear and vivid? • demonstrate control of vocabulary? <p>Does the writing sample demonstrate very good writing technique?</p> <ul style="list-style-type: none"> • Is the writing very fluent? • Does it include varied sentence patterns, including complex sentences? • Does it demonstrate use of writer's techniques (e.g., literary conventions such as imagery and dialogue and/or literary genres such as humor and suspense)? 	
Voice	
<p>Does the writing sample demonstrate effective adjustment of language and tone to task and reader? Does it</p> <ul style="list-style-type: none"> • exhibit appropriate register (e.g., formal, personal, or dialect) to suit task? • demonstrate a sense of audience? • exhibit an original perspective (e.g., authoritative, lively, and/or exciting)? 	

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Writing Applications Rubric

Grades 6–12

SCORE POINT 4	
<p>A Score Point 4 paper represents a good performance. It accomplishes the task, but generally needs to exhibit more development, better organization, or a more sophisticated writing style to receive a higher score.</p>	
Ideas and Content	
<p>Does the writing sample accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • present a unifying theme or main idea? (Writing may include minor tangents.) • stay mostly focused on topic and task? <p>Does the writing sample include relevant ideas? Does it</p> <ul style="list-style-type: none"> • include sufficient information and supporting details? (Details may not be fully developed; ideas may be listed.) • explore some facets of the topic? 	
Organization	
<p>Are the ideas in the writing sample organized logically? Does the writing</p> <ul style="list-style-type: none"> • present a meaningful whole with a beginning, a middle, and an end despite an occasional lapse (e.g., a weak introduction or conclusion)? • generally progress in an order that enhances meaning of text? • include transitions between sentences and paragraphs to enhance meaning of text? (Transitions may be rough, although some topic sentences are included.) 	
Style	
<p>Does the writing sample exhibit good word usage? Does it</p> <ul style="list-style-type: none"> • include vocabulary that is appropriately chosen, with words that clearly convey the writer's meaning? • demonstrate control of basic vocabulary? <p>Does the writing sample demonstrate good writing technique?</p> <ul style="list-style-type: none"> • Is the writing fluent? • Does it exhibit some varied sentence patterns, including some complex sentences? • Does it demonstrate an attempt to use writer's techniques (e.g., literary conventions such as imagery and dialogue and/or literary genres such as humor and suspense)? 	
Voice	
<p>Does the writing sample demonstrate an attempt to adjust language and tone to task and reader? Does it</p> <ul style="list-style-type: none"> • generally exhibit appropriate register (e.g., formal, personal, or dialect) to suit task? (The writing may occasionally slip out of register.) • demonstrate some sense of audience? • attempt an original perspective? 	

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Writing Applications Rubric

Grades 6–12

SCORE POINT 3
<p>A Score Point 3 paper represents a performance that minimally accomplishes the task. Some elements of development, organization, and writing style are weak.</p>
<p>Ideas and Content</p> <p>Does the writing sample minimally accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • attempt a unifying theme or main idea? • stay somewhat focused on topic and task? <p>Does the writing sample include some relevant ideas? Does it</p> <ul style="list-style-type: none"> • include some information with only a few details, or list ideas without supporting details? • explore some facets of the topic?
<p>Organization</p> <p>Is there an attempt to logically organize ideas in the writing sample? Does the writing</p> <ul style="list-style-type: none"> • have a beginning, a middle, or an end that may be weak or absent? • demonstrate an attempt to progress in an order that enhances meaning? (Progression of text may sometimes be unclear or out of order.) • demonstrate an attempt to include transitions? (Are some topic sentences used? Are transitions between sentences and paragraphs weak or absent?)
<p>Style</p> <p>Does the writing sample exhibit ordinary word usage? Does it</p> <ul style="list-style-type: none"> • contain basic vocabulary, with words that are predictable and common? • demonstrate some control of vocabulary? <p>Does the writing sample demonstrate average writing technique?</p> <ul style="list-style-type: none"> • Is the writing generally fluent? • Does it contain mostly simple sentences (although there may be an attempt at more varied sentence patterns)? • Is it generally ordinary and predictable?
<p>Voice</p> <p>Does the writing sample demonstrate an attempt to adjust language and tone to task and reader? Does it</p> <ul style="list-style-type: none"> • demonstrate a difficulty in establishing a register (e.g., formal, personal, or dialect)? • demonstrate little sense of audience? • generally lack an original perspective?

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Writing Applications Rubric

Grades 6–12

SCORE POINT 2
<p>A Score Point 2 paper represents a performance that only partially accomplishes the task. Some responses may exhibit difficulty maintaining a focus. Others may be too brief to provide sufficient development of the topic or evidence of adequate organizational or writing style.</p>
<p>Ideas and Content</p> <p>Does the writing sample only partially accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Does it</p> <ul style="list-style-type: none"> • attempt a main idea? • sometimes lose focus or ineffectively display focus? <p>Does the writing sample include few relevant ideas? Does it</p> <ul style="list-style-type: none"> • include little information and few or no details? • explore only one or two facets of the topic?
<p>Organization</p> <p>Is there a minimal attempt to logically organize ideas in the writing sample?</p> <ul style="list-style-type: none"> • Does the writing have only one or two of the three elements: beginning, middle, and end? • Is the writing sometimes difficult to follow? (Progression of text may be confusing or unclear.) • Are transitions weak or absent (e.g., few or no topic sentences)?
<p>Style</p> <p>Does the writing sample exhibit minimal word usage? Does it</p> <ul style="list-style-type: none"> • contain limited vocabulary? (Some words may be used incorrectly.) • demonstrate minimal control of vocabulary? <p>Does the writing sample demonstrate minimal writing technique?</p> <ul style="list-style-type: none"> • Does the writing exhibit some fluency? • Does it rely mostly on simple sentences? • Is it often repetitive, predictable, or dull?
<p>Voice</p> <p>Does the writing sample demonstrate language and tone that may be inappropriate to task and reader? Does it</p> <ul style="list-style-type: none"> • demonstrate use of a register inappropriate to the task (e.g., slang or dialect in a formal setting)? • demonstrate little or no sense of audience? • lack an original perspective?

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Writing Applications Rubric

Grades 6–12

SCORE POINT 1
<p>A Score Point 1 paper represents a performance that fails to accomplish the task. It exhibits considerable difficulty in areas of development, organization, and writing style. The writing is generally either very brief or rambling and repetitive, sometimes resulting in a response that may be difficult to read or comprehend.</p>
<p>Ideas and Content</p> <p>Does the writing sample fail to accomplish the task (e.g., support an opinion, summarize, tell a story, or write an article)? Is it</p> <ul style="list-style-type: none"> • difficult for the reader to discern the main idea? • too brief or too repetitive to establish or maintain a focus? <p>Does the writing sample include very few relevant ideas?</p> <ul style="list-style-type: none"> • Does it include little information with few or no details or unrelated details? • Is it unsuccessful in attempts to explore any facets of the prompt?
<p>Organization</p> <p>Are the ideas in the writing sample organized illogically?</p> <ul style="list-style-type: none"> • Does it have only one or two of the three elements: beginning, middle, or end? • Is it difficult to follow, with the order possibly difficult to discern? • Are transitions weak or absent (e.g., without topic sentences)?
<p>Style</p> <p>Does the writing sample exhibit less than minimal word usage? Does it</p> <ul style="list-style-type: none"> • contain limited vocabulary, with many words used incorrectly? • demonstrate minimal or less than minimal control of vocabulary? <p>Does the writing sample demonstrate less than minimal writing technique? Does it</p> <ul style="list-style-type: none"> • lack fluency? • demonstrate problems with sentence patterns? • consist of writing that is flat and lifeless?
<p>Voice</p> <p>Does the writing sample demonstrate language and tone that may be inappropriate to task and reader? Does it</p> <ul style="list-style-type: none"> • demonstrate difficulty in choosing an appropriate register? • demonstrate a lack of a sense of audience? • lack an original perspective?

NOTE: These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 6–12.

Language Conventions Rubric

Grades 9–12

Students will apply to their writing the Standard English conventions defined in the Indiana Academic Standards for their grade and for all previous grades.

Score	Does the writing sample exhibit a superior command of language skills?
4	<p>A Score Point 4 paper exhibits a superior command of written English language conventions. The paper provides evidence that the student has a thorough control of the concepts outlined in the Indiana Academic Standards associated with the student's grade level. In a Score Point 4 paper, there are no errors that impair the flow of communication. Errors are generally of the first-draft variety or occur when the student attempts sophisticated sentence construction.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a superior command of capitalization conventions? • Does the writing sample demonstrate a superior command of the mechanics of punctuation? • Does the writing sample demonstrate a superior command of grade-level-appropriate spelling? • Does the writing sample demonstrate a superior command of grammar and Standard English usage? • Does the writing sample demonstrate a superior command of paragraphing? • Does the writing sample demonstrate a superior command of sentence structure by not using run-on sentences or sentence fragments?
Score	Does the writing sample exhibit a good control of language skills?
3	<p>In a Score Point 3 paper, errors are occasional and are often of the first-draft variety; they have a minor impact on the flow of communication.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a good control of capitalization conventions? • Does the writing sample demonstrate a good control of the mechanics of punctuation? • Does the writing sample demonstrate a good control of grade-level-appropriate spelling? • Does the writing sample demonstrate a good control of grammar and Standard English usage? • Does the writing sample demonstrate a good control of paragraphing? • Does the writing sample demonstrate a good control of sentence structure by only occasionally using run-on sentences or sentence fragments?
Score	Does the writing sample exhibit a fair control of language skills?
2	<p>In a Score Point 2 paper, errors are typically frequent and may occasionally impede the flow of communication.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a fair control of capitalization conventions? • Does the writing sample demonstrate a fair control of the mechanics of punctuation? • Does the writing sample demonstrate a fair control of grade-level-appropriate spelling? • Does the writing sample demonstrate a fair control of grammar and Standard English usage? • Does the writing sample demonstrate a fair control of paragraphing? • Does the writing sample demonstrate a fair control of sentence structure by frequently using run-on sentences or sentence fragments?
Score	Does the writing sample exhibit a minimal or less than minimal control of language skills?
1	<p>In a Score Point 1 paper, errors are serious and numerous. The reader may need to stop and reread part of the sample and may struggle to discern the writer's meaning.</p> <ul style="list-style-type: none"> • Does the writing sample demonstrate a minimal control of capitalization conventions? • Does the writing sample demonstrate a minimal control of the mechanics of punctuation? • Does the writing sample demonstrate a minimal control of grade-level-appropriate spelling? • Does the writing sample demonstrate a minimal control of grammar and Standard English usage? • Does the writing sample demonstrate a minimal control of paragraphing? • Does the writing sample demonstrate a minimal control of sentence structure by using many run-on sentences or sentence fragments?

NOTE: The elements of this rubric are applied holistically; no element is intended to supersede any other element. The variety and proportion of errors in relation to the length of the writing sample are considered. A very brief paper consisting of two or three sentences may receive no more than 2 score points.

These scoring rubrics are used for students tested on the fall *ISTEP+* assessment in Grades 9–12.

WRITING: Written English Language Conventions

Students write using Standard English conventions appropriate to their grade level. The students' ability to write clear and correct English is assessed by multiple-choice items as well as by application of the four-point Language Conventions Rubric to extended student writing. Specific skills assessed by multiple-choice items may include use of correct and varied sentence types, identification and use of parallelism, and correct use of noun phrases that function as adjectives, as well as correct use of grammar, punctuation, capitalization, and spelling.

19 Read this sentence.

France the winner of 1998 World Cup faced formidable opposition in the 2002 World Cup, especially against the strong teams from South America.

Choose the correct way to punctuate the underlined part of the sentence.

- ☐ France the winner of the 1998 World Cup,
- ☐ France, the winner of the 1998 World Cup
- ☒ France, the winner of the 1998 World Cup,
- ☐ France the winner of the 1998, World Cup,

20 Read this sentence.

By the time they arrive, I was finished cooking.

Choose the word or group of words that BEST replaces the underlined part of the sentence.

- ☒ will have finished
- ☐ have finished
- ☐ will finish
- ☐ finished

21 Choose the sentence that is punctuated correctly.

- ☐ No garden should be without herbs, not only can they be used in the kitchen, but they are also decorative plants.
- ☐ No garden should be without herbs, not only can they be used in the kitchen; but they are also decorative plants.
- ☐ No garden should be without herbs; not only can they be used in the kitchen; but they are also decorative plants.
- ☒ No garden should be without herbs; not only can they be used in the kitchen, but they are also decorative plants.

22 Read this sentence.

In A Tale of two cities, Charles Dickens explores the social injustices that resulted in the French Revolution.

Which of the following is the BEST way to capitalize the underlined group of words?

- ☐ A tale of Two Cities
- ☐ A Tale Of Two Cities
- ☒ A Tale of Two Cities
- ☐ A tale of two Cities

23 Read this sentence.

He was not a rich man, though he would never be thought of as pennyless.

Which of these is spelled correctly and BEST replaces the underlined word in the sentence?

- ☒ penniless
- ☐ penniles
- ☐ penneeless
- ☐ pennyles



Mathematics

GRADE 8 INDIANA ACADEMIC STANDARDS

- ☐ **Number Sense**
Students know the properties of rational and irrational numbers expressed in a variety of forms. They understand and use exponents, powers, and roots.
- ☐ **Computation**
Students compute with rational numbers expressed in a variety of forms. They solve problems involving ratios, proportions, and percentages.
- ☐ **Algebra and Functions**
Students solve simple linear equations and inequalities. They interpret and evaluate expressions involving integer powers. They graph and interpret functions. They understand the concepts of slope and rate.
- ☐ **Geometry**
Students deepen their understanding of plane and solid geometric shapes and properties by constructing shapes that meet given conditions, by identifying attributes of shapes, and by applying geometric concepts to solve problems.
- ☐ **Measurement**
Students convert between units of measure and use rates and scale factors to solve problems. They compute the perimeter, area, and volume of geometric objects. They investigate how perimeter, area, and volume are affected by changes of scale.
- ☐ **Data Analysis and Probability**
Students collect, organize, represent, and interpret relationships in data sets that have one or more variables. They determine probabilities and use them to make predictions about events.
- ☐ **Problem Solving**
Students make decisions about how to approach problems and communicate their ideas. Students use strategies, skills, and concepts in finding and communicating solutions to problems. Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations.

Calculator Usage

Calculators are not required on *ISTEP+*. All items in *ISTEP+* can be solved without the use of a calculator. Calculators are allowed on indicated sections of the Mathematics Assessment.

General directions for calculator usage on *ISTEP+*

- Calculators may be used on only those sections of *ISTEP+* where calculator use is designated (unless otherwise stated in a student's IEP, in which case the student would be allowed to use a calculator on the entire test).
- Sharing calculators is **not** allowed.
- Students are to use calculators with which they are familiar.
- Where calculator use is designated, students are to use their best judgment as to when to use the calculator. The calculator is meant to aid in problem solving, not get in the way.
- For open-ended items, students should write down the process for solving the problem, then use the calculator to do the actual computation.
- Students will be allowed to use their own calculator unless it is on the **Not permitted on *ISTEP+*** list. To see the list of calculators that are not permitted, look on the *ISTEP+* InfoCenter located at www.doe.state.in.us/istep.

Calculators are not allowed on some items in *ISTEP+*. These items are similar to items in this sampler which are designated by the following icon:



The items that are **not** designated as No Calculator items in this sampler may appear on either the calculator or non-calculator sections of the Mathematics Assessment.

Mathematics Reference Sheet

The *ISTEP+* Grades 9 and 10 Mathematics Reference Sheet is located on pages 67 and 68 after the sample items. The reference sheet is always available to students when they take the tests.

When the reference sheet icon, shown below, appears with an item, it indicates to the student that there is information on the reference sheet that will be useful for solving the item.



Sample Test Items

Number Sense

This standard assesses a student's ability to understand and use various aspects of number theory, including scientific notation, square roots, exponents, and rational and irrational numbers.



1 Which of these is the same as 5^{-3} ?

- ☐ $\frac{1}{15}$
- ☒ $\frac{1}{125}$
- ☐ -15
- ☐ -125



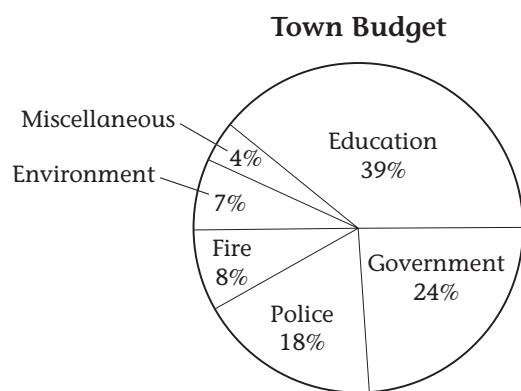
2 Simplify: $\left(\frac{2}{3}\right)^3$

8 / 27	
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Computation

This standard assesses a student's ability to perform multi-step computations with integers, fractions, decimals, percents, and powers, and to solve problems involving interest.

- 3** The graph below shows the budget for a small town.



If the total budget for the town is \$1,005,000, how much money should be budgeted for the departments other than education?

- ☐ \$180,900
- ☐ \$241,200
- ☐ \$391,950
- ☒ \$613,050

- 4** Janna opened a savings account with \$100.00. The savings account earns 2.3% simple interest each year.



If Janna does not deposit any money into the account, how much interest will she earn in 2 years?

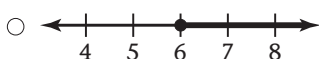
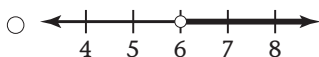
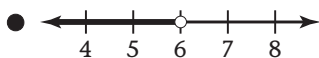
	4	.	6	0
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9

Algebra and Functions

This standard assesses a student's ability to express relationships using algebraic terminology, expressions, equations, inequalities, and graphs.



- 5** Greg's solution to an inequality was $x < 6$. Which graph represents his solution?



- 6** What is the equation of the straight line that has a slope of 2 and passes through point $(-2, -3)$?



- ☐ $y = 2x - 1$
☒ $y = 2x + 1$
☐ $y = -2x + 1$
☐ $y = -2x - 1$



- 7** Solve: $15(8n + 3) = 285$

				2
	1	1	1	
0	0	0	0	0
1	1	1	1	1
2	2	2	2	●
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9



8 Solve: $\frac{x}{5} - 11 \leq 9$

Show All Work

Answer _____

Exemplary Response:

- $x \leq 100$

Sample Process:

- $\frac{x}{5} - 11 \leq 9$

$$\frac{x}{5} \leq 20$$

$$x \leq 100$$

OR

- Other valid process

Rubric:

2 points Exemplary response

1 point Correct complete process; error in computation

0 points Other



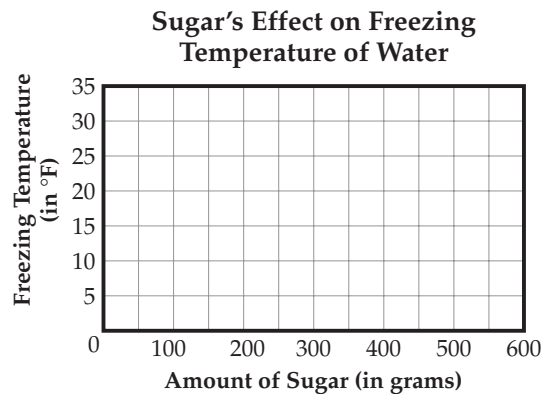
9



The freezing temperature of pure water is 32° Fahrenheit. This temperature is lowered when the water is mixed with sugar. The equation below shows the relationship between the amount of sugar (x), in grams, added to a certain amount of water, and the freezing temperature of the mixture (y), in degrees Fahrenheit.

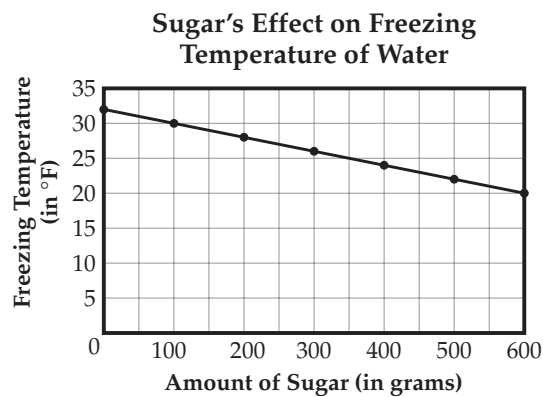
$$y = -0.02x + 32$$

Graph the equation on the grid below.



Exemplary Response:

•



NOTE: If more than one line is drawn, a score of 0 points will be awarded.

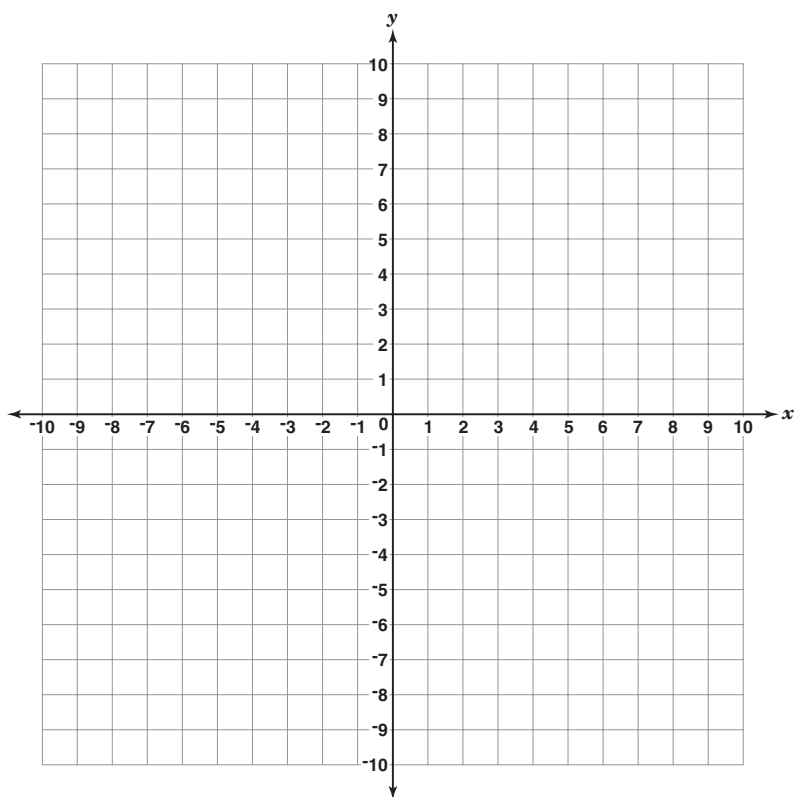
If an incorrect point is plotted with no line drawn, a score of 0 points will be awarded.

Rubric:

- | | |
|-----------------|--|
| 2 points | Exemplary response |
| 1 point | Correct slope of -0.02 with line drawn
OR
Correct y-intercept of 32 with line drawn
OR
No line drawn, at least 2 points plotted that would fall on the correct line, and no incorrect points plotted |
| 0 points | Other |

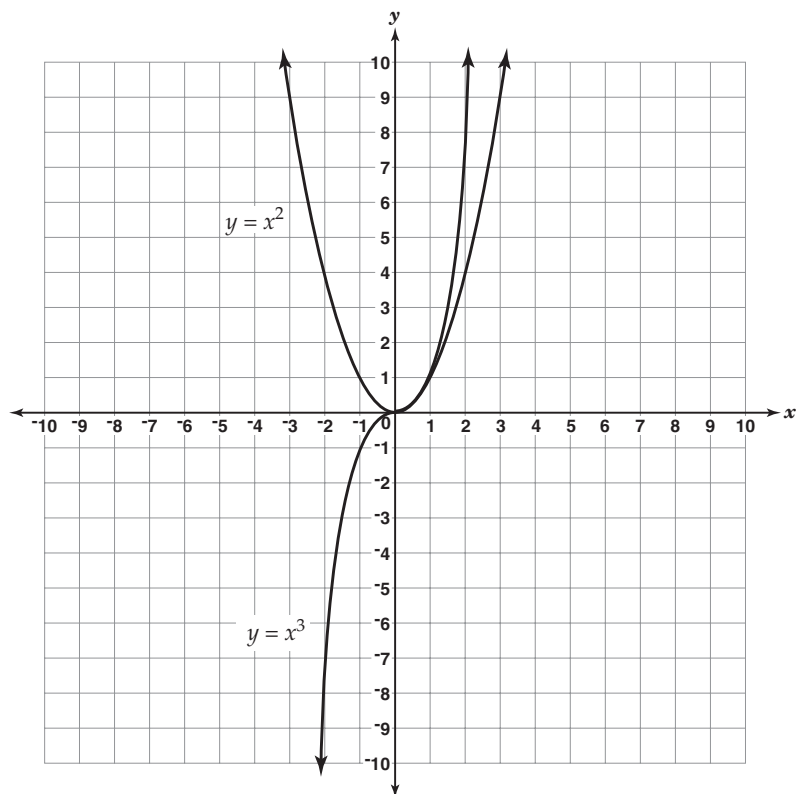


- 10** On the grid below, draw the graphs of $y = x^2$ and $y = x^3$ using the following values for x : $-2, -1, 0, 1, 2$.



Exemplary Response:

•



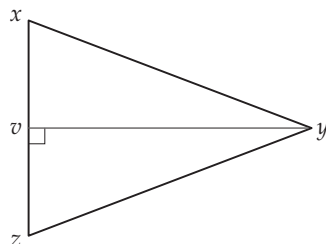
Rubric:

- 2 points** Exemplary response
- 1 point** One correct and complete graph
- 0 points** Other

Geometry

This standard assesses a student's ability to understand and use the principles of two- and three-dimensional geometric figures.

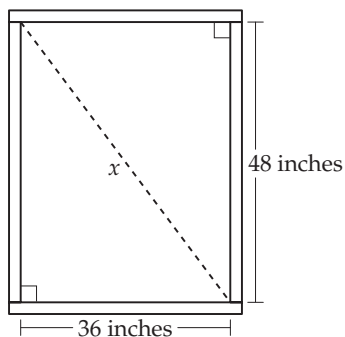
- 11** Look at the isosceles triangle below.



Which of the following statements is correct?

- ☐ \overline{xz} is the altitude of triangle xyz
- ☐ \overline{xy} is congruent to \overline{xz}
- ☒ \overline{zy} is the altitude of triangle xyz
- ☐ \overline{zy} is congruent to \overline{xy}

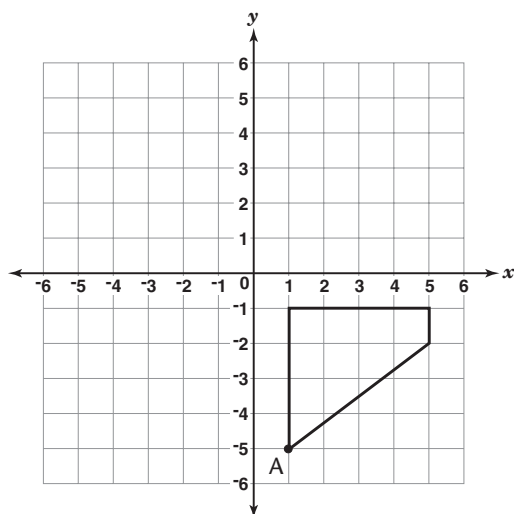
- 12** Mr. Donato is cutting a diagonal board for the center of the gate shown below.



What is the length (x), in inches, of the board that Mr. Donato should use for the diagonal?

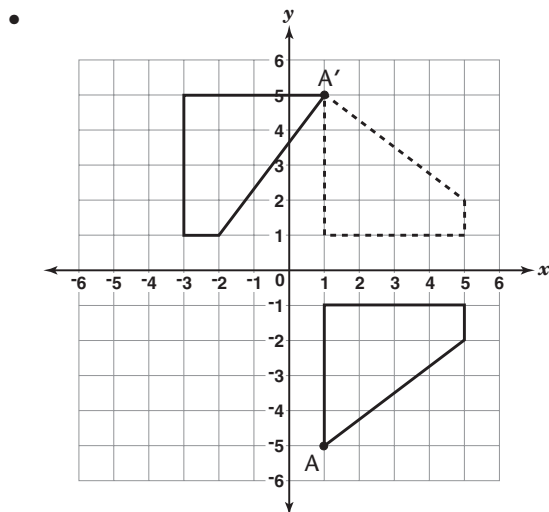
- ☐ 25 inches
- ☐ 48 inches
- ☒ 60 inches
- ☐ 84 inches

- 13** Look at the figure on the coordinate plane below.



On the coordinate plane, reflect the figure over the x -axis and label the reflection of A as A' . Then rotate the new figure clockwise 90° about point A' .

Exemplary Response:



Rubric:

- 2 points** Exemplary response
- 1 point** One correct transformation (reflection or rotation)
- 0 points** Other

Measurement

This standard assesses a student's ability to compare units of measurement, understand and use rates and scale factors to solve problems, and compute perimeter, area, and volume of two- and three-dimensional shapes.



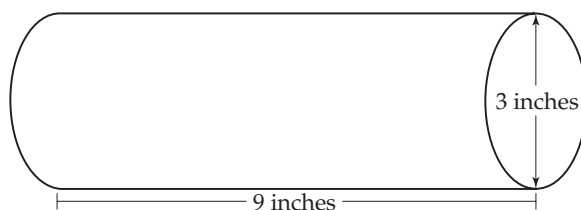
- 14** Alonzo swims at an average rate of 1.5 laps per minute. About how many minutes will it take for Alonzo to swim 30 laps?
- ☐ 15 minutes
- ☒ 20 minutes
- ☐ 45 minutes
- ☐ 50 minutes

- 15** Justin added 3 cups of lemon juice and $12\frac{1}{2}$ quarts of water to a large container to make lemonade. How many TOTAL CUPS of liquid did Justin use to make his lemonade?



5	3			
	1	1	1	
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3		3	3	3
4	4	4	4	4
		5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

- 16** Taylor wants to paint a dowel rod for his birdhouse. A diagram of the dowel rod is shown below.



What is the surface area, in square inches, of the dowel rod?

Show All Work

Answer _____ square inches

Exemplary Response:

- 98.91 square inches

Sample Process:

- $SA = 2\pi r^2 + 2\pi rh$
 $SA = 2\pi(1.5)^2 + 2\pi(1.5)(9)$
 $SA = 2\pi(2.25 + 13.5)$
 $SA = 98.91$

OR

- Other valid process

Rubric:

- 2 points** Exemplary response
- 1 point** Correct complete process; error in computation
- 0 points** Other

Data Analysis and Probability

This standard assesses a student's ability to organize, analyze, and represent data, and to determine probabilities.



- 17** John's golf scores from last month are listed below in ascending order.

68, 72, 74, 74, 74, 74, 78, 79, 81, 82, 82, 83, 83, 87, 88, 89

What is the upper quartile of all the golf scores?

- ☐ 68
☐ 74
☐ 80
☒ 83

- 18** There are 22 different types of flowers in Frank's flower shop. Frank wants to make a bouquet using 3 different types of flowers.

How many different bouquets can he make?

9	2	4	0	
	1	1	1	
0	0	0	0	0
1	1	1	1	1
2	0	2	2	2
3	3	3	3	3
4	4	0	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
0	9	9	9	9

- 19** Kate is conducting a survey to determine what kind of movie people like best. She wants to conduct her survey in locations where she can find a representative sample. Her first survey was conducted at a movie theater before a showing of *Super Cartoon Hero II*.

On the lines below, explain how Kate's choice of location could produce a biased sample.

Kate then surveyed customers at a supermarket while they waited in checkout lanes. Is the supermarket survey less likely or more likely to produce a biased sample than the movie theater survey? On the lines below, explain your reasoning.

Exemplary Response:

- If Kate surveys the people at the movie theater, she will not produce a representative sample. The theater sample is not likely to include people who dislike cartoon movies, and is likely to be over-represented by people who like cartoon movies best.

OR

- Other valid explanation

AND

- The supermarket sample is less likely to produce a biased sample than the movie theater. It is more likely to be a representative sample because all kinds of people shop at the supermarket, even people who don't like movies at all.

OR

- The sample is less likely to produce a biased sample because it is made up of a broader range of people, possibly even children. This sample of people may like a broader range of movies than a sample of people coming out of a cartoon movie.

OR

- Other valid explanation

Rubric:

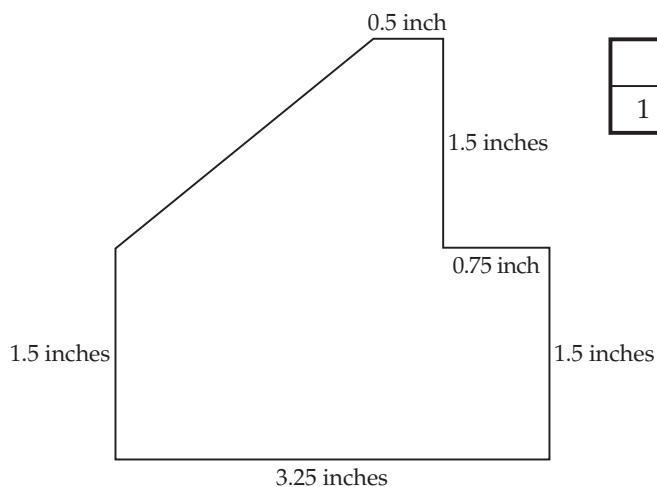
- 2 points** Exemplary response
- 1 point** One correct component
- 0 points** Other

Problem Solving

This standard assesses a student's ability to select appropriate problem-solving strategies, to communicate ideas, and to justify reasoning.

20

Shannon is putting a border around the top of the walls in her bedroom. All but two of the angles in her bedroom are right angles. A diagram of the room is shown below.



SCALE

1 inch = 4 feet

What is the TOTAL perimeter, in feet, of Shannon's bedroom?

Show All Work

Answer _____ feet

Exemplary Response:

- 46 feet

AND

- Correct complete process

Sample Process:

- $3.25 - 0.75 - 0.5 = 2$

$$\begin{aligned}C^2 &= 1.5^2 + 2^2 \\&= 2.25 + 4 \\&= 6.25\end{aligned}$$

$$\begin{aligned}C &= \sqrt{6.25} \\&= 2.5\end{aligned}$$

$$2.5 + 0.5 + 1.5 + 0.75 + 1.5 + 3.25 + 1.5 = 11.5$$

$$11.5 \times 4 = 46$$

OR

- Other valid process

Rubric:

3 points Exemplary response

2 points Correct answer only

OR

Correct complete process; error in computation

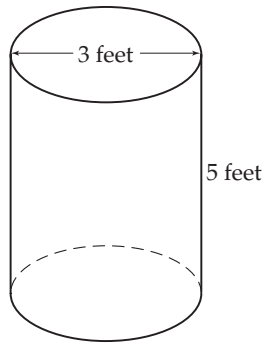
1 point Correct process for finding perimeter in inches only

0 points Other

21



The Chavez Furniture Company is purchasing 1,500 cubic feet of glue. They need to buy cylindrical containers to hold the glue. Each container costs \$35 plus 6% tax. The containers have a diameter of 3 feet and a height of 5 feet, as shown in the diagram below.



The company's purchasing agent says that it will cost \$1,558.20 to purchase the minimum number of containers needed to hold all the glue. The purchasing agent is incorrect.

On the lines below, explain why the purchasing agent is incorrect. Be sure to include in your explanation the maximum number of containers the company could purchase using the amount determined by the purchasing agent.

What is the least amount the company will have to pay for containers to hold all the glue?

Show All Work

Answer \$ _____

Exemplary Response:

Explanation equivalent to the following:

- The purchasing agent is incorrect because the amount was calculated on needing 42 containers, but should have been calculated on needing 43 containers. If only 42 containers are purchased, there will be glue left over.

OR

- Other valid explanation

AND

- \$1,595.30

AND

- Correct complete process

Sample Process:

- $\pi(1.5^2)(5) = 3.14(1.5^2)(5) = 35.325$
 $\frac{1,500}{35.325} = 42.5$

Rounding up to next whole container = 43 containers

$$35 + 35(0.06) = 37.10$$
$$(37.10)(43) = 1,595.30$$

OR

- Other valid process

NOTE: Award credit for a correct complete process with an error in computation.

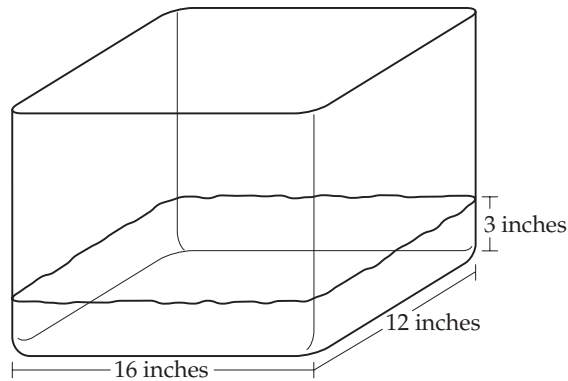
Rubric:

3 points	Exemplary response
2 points	Two correct components
1 point	One correct component
0 points	Other

22



Ms. Sherwood is going to wash her marble cutting board in her sink. The cutting board measures 1.5 inches by 6 inches by 7 inches. The sink measures 16 inches by 12 inches and has 3 inches of water in it, as shown in the diagram below.



Determine the amount, to the nearest tenth of an inch, that the water in Ms. Sherwood's sink will rise when she submerges the cutting board. Write the answer on the line below.

Show All Work

Answer _____ inch(es)

Exemplary Response:

- 0.3 inch
- AND
- Correct complete process

Sample Process:

- $(1.5)(6)(7) = 63$ cubic inches of water displaced

$$\frac{63}{(12)(16)} = 0.328 \text{ inch}$$

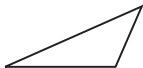




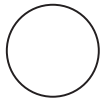
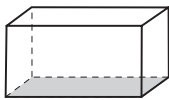
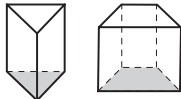
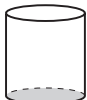
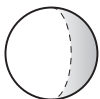

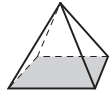
OR

- Other valid process

Rubric:

- 2 points** Exemplary response
- 1 point** Correct answer only
- OR
- Correct complete process; error in computation
- 0 points** Other

ISTEP+ Grades 9 and 10 Mathematics Reference Sheet

Shape		Formulas for Area (A) and Circumference (C)	
Triangle		$A = \frac{1}{2}bh = \frac{1}{2} \times \text{base} \times \text{height}$	
Rectangle		$A = lw = \text{length} \times \text{width}$	
Trapezoid		$A = \frac{1}{2}(b_1 + b_2) \times h = \frac{1}{2} \times \text{sum of bases} \times \text{height}$	
Parallelogram		$A = bh = \text{base} \times \text{height}$	
Square		$A = s^2 = \text{side} \times \text{side}$	
Circle		$A = \pi r^2 = \pi \times \text{square of radius}$ $C = 2\pi r = 2 \times \pi \times \text{radius}$ $\pi \approx 3.14 \text{ or } \frac{22}{7}$	
Figure		Formulas for Volume (V) and Surface Area (SA)	
Rectangular Prism		$V = lwh = \text{length} \times \text{width} \times \text{height}$ $SA = 2lw + 2hw + 2lh$ $= 2(\text{length} \times \text{width}) + 2(\text{height} \times \text{width}) + 2(\text{length} \times \text{height})$	
General Prisms		$V = Bh = \text{area of base} \times \text{height}$ $SA = \text{sum of the areas of the faces}$	
Cylinder		$V = \pi r^2 h = \pi \times \text{square of radius} \times \text{height}$ $SA = 2\pi r^2 + 2\pi r h$ $= 2 \times \pi \times \text{square of radius} +$ $2 \times \pi \times \text{radius} \times \text{height}$	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$
Sphere		$V = \frac{4}{3}\pi r^3 = \frac{4}{3} \times \pi \times \text{cube of radius}$ $SA = 4\pi r^2 = 4 \times \pi \times \text{square of radius}$	
Right Circular Cone		$V = \frac{1}{3}\pi r^2 h = \frac{1}{3} \times \pi \times \text{square of radius} \times \text{height}$	
Regular Pyramid		$V = \frac{1}{3}Bh = \frac{1}{3} \times \text{area of base} \times \text{height}$	

Equation of a Line

Slope-Intercept Form:

$$y = mx + b$$

where m = slope and b = y -intercept

Point-Slope Form:

$$y - y_1 = m(x - x_1)$$

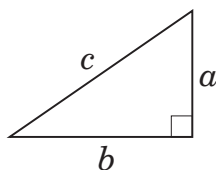
where m = slope and (x_1, y_1) is a point on a line

Slope of a Line

Let (x_1, y_1) and (x_2, y_2) be two points in the plane.

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1} \text{ where } x_2 \neq x_1$$

Pythagorean Theorem



$$a^2 + b^2 = c^2$$

Distance Formula

$$d = rt$$

where d = distance, r = rate, and t = time

Temperature Formulas

$$^{\circ}\text{C} = \frac{5}{9}(\text{F} - 32)$$

$$^{\circ}\text{Celsius} = \frac{5}{9} \times (^{\circ}\text{Fahrenheit} - 32)$$

$$^{\circ}\text{F} = \frac{9}{5}\text{C} + 32$$

$$^{\circ}\text{Fahrenheit} = \frac{9}{5} \times ^{\circ}\text{Celsius} + 32$$

Simple Interest Formula

$$i = prt$$

where i = interest, p = principal,

r = rate, and t = time

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

where $ax^2 + bx + c = 0$, $a \neq 0$, and $b^2 - 4ac \geq 0$

Conversions

1 yard = 3 feet = 36 inches

1 mile = 1,760 yards = 5,280 feet

1 acre = 43,560 square feet

1 hour = 60 minutes

1 minute = 60 seconds

1 liter = 1000 milliliters = 1000 cubic centimeters

1 meter = 100 centimeters = 1000 millimeters

1 kilometer = 1000 meters

1 gram = 1000 milligrams

1 kilogram = 1000 grams

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 pound = 16 ounces

1 ton = 2,000 pounds

***ISTEP+* Grade 9 Item Sampler**

Indiana Statewide Testing for Educational Progress

